

IN THE CLAIMS:

A complete listing of all the claims is presented herewith.

Claim 1. (Currently Amended).

A porous silicate granular material, useful especially as aggregate for the production of construction materials such as including lightweight concrete, mortar or heat-insulating plaster and containing glass and a glassy-crystalline component comprising

45 to 85 wt.% SiO_2 ,

5 to 20 wt.% alkali oxide,

5 to 30 wt.% alkaline earth oxide and

2 to 30 wt.% of other oxides selected from the group consisting of aluminia, iron oxide, and mixtures thereof, such as Al_2O_3 , and/or Fe_2O_3 , whereby the glassy crystalline component accounts for 5 to 75 wt.% of the granular material, characterised in that wherein the glassy crystalline component is the sinter reaction product of a mixture of

quartz powder and/or another essentially pure fine-grained SiO_2 carrier,

powdered clay and/or powdered clay mineral,

Portland cement, caustic soda and

sodium hydroxide in hydrous solution and an expanding agent as at least one additive.

Claim 2. (Currently Amended).

A method for producing granular material, useful as according to Claim 1, aggregate for the production of construction materials including lightweight concrete, mortar or heat-insulating plaster and containing glass and a glassy- crystalline component comprising

45 to 85 wt.% SiO₂,

5 to 20 wt.% alkali oxide,

5 to 30 wt.% alkaline earth oxide and

2 to 30 wt.% of other oxides selected from the group

consisting of aluminia, iron oxide, and mixtures

thereof, whereby the glassy crystalline component

accounts for 5 to 75 wt.% of the granular material,

characterised in that wherein

- a mixture of at least

powdered glass,

quartz powder and/or another essentially pure

fine-grained SiO₂ carrier,

powdered clay and/or powdered clay mineral,

Portland cement, caustic soda,

sodium hydroxide in hydrous solution;

an expanding agent as at least one additive and

and if necessary other additives and/or accessory

water agents is prepared,

- the mixture is agglomerated at a temperature of 20°C to 150°C at normal standard pressure of 101325 Pa with the water

vapour partial pressure being adjusted, selected or controlled as a function of time temperature and carbon dioxide being excluded or admitted, whereby the admission of carbon dioxide is controlled by adjusting or selecting the carbon dioxide partial pressure,

- the intermediate product is optionally crushed and graded if necessary,

- the intermediate product thus obtained is heated at normal standard pressure of 101325 Pa with the carbon dioxide partial

pressure and/or the water vapour partial pressure being adjusted, selected or controlled as a function of time temperature, to a temperature of 700° C to 1250° C and sintered and expanded at this temperature.

Claim 3. (Currently Amended).

The method according to Claim 2,

characterised in that wherein after agglomeration the mixture is put into intermediate storage and then dried and/or heat treated.

Claim 4. (Currently Amended).

The method according to Claim 3,
~~characterised in that wherein~~ the mixing,
agglomeration, intermediate storage, drying and/or heat
treatment takes place with carbon dioxide being
~~eliminated or admitted, whereby the admission of carbon~~
~~dioxide is controlled by adjusting or selecting the~~
~~carbon dioxide partial pressure.~~

Claim 5. (Cancelled).

Claim 6. (Currently Amended).

The method according to Claim 2,
~~characterised in that wherein~~ powdered glass, quartz
powder and/or another essentially pure fine-grained
 SiO_2 carrier having a grain size of $< 40\mu\text{m}$ is used.

Claim 7. (Currently Amended).

The method according to Claim 2,
~~characterised in that wherein~~ during preparation of the
mixture silicate, oxide, hydroxide, carbonate and/or
sulphate materials are added as additives ~~and/or~~
~~accessory agents.~~

Claim 8. (Currently Amended).

The method according to Claim 2,
~~characterised in that~~ wherein during preparation of the mixture water glass solutions, filter dust, ground slag, powdered ceramic, quicklime, hydrated lime, powdered limestone, gypsum, anhydride, powdered corundum, aluminium hydrate and/or oxides, hydroxides, carbonates and sulphates of alkalis and alkaline earths are added.

Claim 9. (Currently Amended).

The method according to Claim 2,
~~characterised in that~~ wherein a mass fraction of the granular material originating from additives and/or accessory agents as end product is a maximum of 20 wt.%.

Claim 10. (Currently Amended).

The method according to Claim 2,
~~characterised in that~~ wherein carbon and/or carbon carriers ~~such as~~ including soot, powdered graphite, powdered coal, fine-grained silicon carbide and carbohydrate are used as swelling agents.

Claim 11. (Currently Amended).

The method according to Claim 2,
~~characterised in that wherein~~ the mixture is adjusted
as a doughy pasty mass and then agglomerated.

Claim 12. (Currently Amended).

The method according to Claim 2,
~~characterised in that wherein~~ the mixture, especially
in the form of a doughy pasty mass is subjected to heat
treatment.

Claim 13. (Currently Amended).

The method according to Claim 12,
~~characterised in that wherein~~ the heat treatment is
provided by Joule heat via an ac power supply.

Claim 14. (Currently Amended).

The method according to Claim 12,
~~characterised in that wherein~~ the heat treatment takes
place by supplying microwaves.

Claim 15. (Currently Amended).

The method according to Claim 2,
~~characterised in that wherein~~ the agglomeration is
accomplished by a granulation process or takes place

by pressing.

Claim 16. (Currently Amended).

The method according to Claim 2,
~~characterised in that~~ wherein the sintering and
expanding takes place in a rotary kiln with the
addition of a parting compound.

Claim 17. (Cancelled).